

Patched motifs HTPL and alignment Structure of

FIG. 1A

HTPL-L (954 a.a.)

HTPL-S (767 a.a.)

Patched

IG. 1B

		78	240	125	97	127	
80	-	VISTNV	VODLR	TOTRV	TRNNT	IMMI	
70	*:	RYLNEWYOWNDE	ATFAEVSKLDGA	(FANAVYOLDKY	/FSNELKLMESF	WLHEIEILNOW	
9		NS-NILDI	SD-SLLDP	NDSNILDPI	SGANILDRY	DGGSIMRD	
20	***************************************	VLSSKIRYTFTPDDIRSYTERGSRSEHEPL-VERKFFPGDGYPISRFSIITAKARNS-NILDIRYLNEVVOVNDFISTNV 78	deeedleehyTPVGSPAKAERRFVQGHFTTnDSYRFSASRRSTEANFVSLLVVSYSD-SLLDPAFFAEVSKLDGAVODLR 240	NPLSDAVYLFTPLGAQSKMERMSIHEKWPL-TDNNYIPGRAVTQSREIOVTALARNDSNILDPKFANAVYOLDKYTOTRV 125	NVVYSLLMIFGPYSYTERRIIHDAWPL-VDGTFVAGRAVTQSREVOVAVVARSGGNILDRVFSNELKLMESFIRNNI 97	LRVDDPSYVFTPSDARWRREISVFNENWPL-DENKFLPGKSFEAKRFVNILIRAKDGGSIMRDNVLHEIEILNQWIMMI 127	
40	:	FPGDGYP	SASRRST	TIPGRAVT	"VAGRAVT	LPGKSFE	
30	*	SEHEPL-VERK	QGHFTTnDSYR	HEKWPL-TDNN	HDAWPL-VDGTE	NENWPL-DENK	
20	:: *:	DIRSYTERGSF	GSPAKAERRFV	GAQSKMERMSI	SYTERRII	DARWRREISVF	
10	: :	YTETPD	ehYTPV	Υ LF T PL	MIFGPY	YVFTPS	
motif	*:	VLSSKIF	deeedle	NPLSDAV	NVVYSLI	LRVDDPS	
P		ч	162	47	22	49	
Patched		Consensus	٠,	gi 1825729	gi 1707052	gi 3892144	

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	152	313	199	171	200
160	PGN-	LGMg	neTDI-	ngENI-	GT-
150	NPGGVKLDPN-	FPGGYILGGS-	SIGGVTVMKge	ALGGVKLAKgd	IFGDVQFFQn-
140	GTKIYLGP	SRHPLYLTG	SEEGEVICE	SDKSAYIAS	CDTPVYLGG
130	RIDLTYPTMTF	SISFPAYNHO	GFNITYPYFRF	GINITYPTVRLS	ILDLHFPRGGT
120	CLRSNĽHNS	VNKTLNLS	ILSDLHNH)LASRLHOH	LERENDVNQ
110	NCPVNQHYNGQI	CVPPNPILYAW	GCPSNKHVF	RCANNDHIC	VCGANEHIQ-MI
100	OLCMRFCDI	OVCARYRAL	NECLQYKNG	OLCLAGDDG	OLCLSY-DW
90 100 110 120 130 140 150 160*	TIPVSGITLSFKDLCMRFCDINCPVNQHYNGQILRSNLHNSRIDLTYPTMTFFGTKIYLGPNFGGVKLDPNPGN- 152	VAKEKGSQIQYQQVCARYRALCVPPNPILYAWQVNKTLNLSSISFPAYNHGRHPLYLTGFFGGYILGGSLGMG 313	KVLHNGHYYSYKNLCLQYKNGGCPSNKHVHILSDLHNHGFNITYPYFRFGSEGGYIGSSIAGVTVMKGeneTDI- 199	TVQFSNRTWSFADLCLAGEDGRCANNDHIQLASRLHQHGINITYPTVRLSDKSAYIASAIGGVKLAKGdngENI- 171	SIPTDD1KFNLTYQDLCLSY-DWVCGANEH1Q-MLLRRNDVNQILDLHFPRGGTKDTPVYLGGIFGDVQFFQnGT- 200
					128
	Consensus	#TFD-D	g1 1825/29	g1 1/0/052	gr 3892144



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Patched motif (Continued)

170	250 260 310 320 320 320 320 320 320 320 320 320 32	330 340 350 360 370 380 390 400 * * * * * * AIGVDDMFLMVHAWQRTTRSLSVKKRMGEVLEEAGPSITITTSLTNVLSFGIGAITPTPEIQLFCIYTAVAIFFDFIY 370GVGVDDMFLMVAAVRRTSRTHTVHERMGEVLADAAVSITITTTITTITTITTITTITTITTPAVQIFCIYTGTTLLFCYFY 529AVGVDNMFLMVAAVRRTSRTHTVHERMGECLADAAVSILITSSTDVLSFGVGAITTIPAVQIFCIYTGTALFFAFIY 417AVGTDNMFLMVASLKRTDRNLKYDQRIAECMADAAVSILITALTDALSFGVGTITTIPAVQIFCIYTMCALLLTFAY 390 qipaigidddmflmvacwdqtskslsvpermsktlshagvavtitnvvtdvmsfaigcitdddpreigyfciyacvsvafsyfy 434	410 420 430 440 450 460 470 480* * * * * * * * * QLTFFAALMAIAGKYEMKGRHSLFLRAVDAAETESPQRLDSRGSAK
170	250* ILVTFSILTSVR LIILFAVISCFR LLIVFSTLCSIS LLIVFSVLCSIS ILVOFSVLCSIV	• 1 1 1 1 1 1 1 1 1 1 1 1 1	410* QLTFFAALMAIA NITCFGAFWALD QUTFFFAACLALA QLTFFFAACLALA QLTFFSGAWAIM
153	227	294	371
314	393	453	530
200	274	341	418
172	247	314	391
201	275	355	435
consensus	consensus	consensus	consensus
HTPL-L	HTPL-L	HTPL-L	HTPL-L
gi 1825729	gi 1825729	gi 1825729	gi 1825729
gi 1707052	gi 1707052	gi 1707052	gi 1707052
gi 3892144	gi 3892144	gi 3892144	gi 3892144

FIG. 1



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FIG. 1B Patched motif (Continued)

475 632 528 522 592	555 709 607 600	633 779 685 676 744	686 832 738 729 824
\$60 * SLDPAKL SLDLRNL SLEPVNL SLEPANL	640 * 'YSFISE 'X-GNS 'YQKELE 'YQKELE 'SEEIHK	720 * BEYPDEN EDCQIP RWPEFN RRFEQYN	800 * VITVSI WVTFAI WVALAC WVALAC
490 550 550 550 550 550 550 550 550 550 5	630* STKFWLRDYENFI JTEFWLDAYVQYI SVQFWLFEMER-Y SVQFWLREMQV	710* rteliktwrggval ktilifqleria- pydaymsfreyaa pyeayntfreias	760 770 780 790 800 ** * * * -AFFLDQILSIGPTTIQSIIWTLICMAVVCFLFIPNPNTVFVITVSI -WMPTDQYAILEDTVRNVLVASAAMFIVSLLI,IPYPLCSLWVTRAI -WMPTDQYAILIPWTVQNIIIALLVMIVIAVLFIPQPMCSLWVALAC -WLFTDQYALVVPNTMQDIIVAVACMLVISALL,IPQPVCSFWVAVTI AFPFADQYLIILPATIQNVVISLLCMAVVSFLL,NPSLPSGFVIFVSI
540 .* LLUYLUYLY VEIYVLYI MUWFVIYLI GLWYLIYLG GLIFUVYLL	620 .* TPYAMGKNS NVY-VDKNI SKHAIGMES CKVAIGDDS	700 ** KDLSTWTDE TDVSSSAKE KDLVTTMDC KDLVTTMDC KNFVEPNDE	780 ** WTLICMAVA VASAAMFIV IALLVMIVI VAVACMLVI ISLLCMAVV ISLLCMAVV
530 .* FLLNPKVRVCV FLLNPKVRVCV ALMHPVVRGIA /LMHPVVRGIA	610* KLNEMVDEFEN KLENCTKIFEK KVHAMVLDFAT MADKMASTFAN	690 .* * VKKFRFTTGGKD IISSRGF-IQTTD VKSFRFILGMKD IKTFRFMIGMRD	770 .* SIGPTTIQSIII ALEDTVENVLN XILEDTVENVLN XVPNTMQDIII ILEPATIQNVV
520 VKFFLNIYCPI SLFFRDYFGPI SLFFRDYFGPI SRFFRGEWYAPI TSFFRNWYAPI	600* PDLTNPENRDI VDYWDKDVRQI PDLRNHTSRDI PDLRNHTSRDI PDLRDPVERII	680 DI-KTDYSTTIV DI-NISSSNEII GPMPDDDNGTWV G-RNNNSERII	760 * AFFLDQILE FIYFDQYAL WMFTDQYII WLFTDQYII
510 .* 5-AEQ-AV 1gtDIHPM 7-VKQP-LT 1-LHHC-AA	590 QVTUFVNNP PRVMVINTKK ZQVQIVINNA ASLQIVVSNP	670 rSHWVGDLVWDD rQHDI WPLAEDIYWG SQPWVUDVVWG STQWASNLKIN-	750 .*
.* SXSHI SYPDEI HSASHI sqatSPASKI nsslSKKSKI	580 .* REKHVWPYGI EENYFSDYGI LeKYYWKYG LeKHYWHYGI I-KHFWRIGI	660 .* EWFL-KSPGF PDFLSNFPNF HHFL-ASKTN AQXI-YSDMS	740
490 500 510 520 530 540 550 560	570 580 600 610 620 620 630 640*	650 660 670 680 690 700 710 720 720* *	730 740 750 760 770 780 790 800* * * * * * * * VITVEDED
417 572 469 451 515	476 1 633 <i>1</i> 529 1 523 1 593 v	556 1 710 (608 V 601]	634 \ 780 I 686 \ 677 \ 745 \
consensus HTPL-L gi 1825729 gi 1707052 gi 3892144	consensus HTPL-L gi 1825729 gi 1707052 gi 3892144	consensus HTPL-L gi 1825729 gi 1707052 gi 3892144	consensus HTPL-L gi 1825729 gi 1707052 gi 3892144



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Patched motif (Continued)

### ### ##############################	SEQ ID NO: 4805 SEQ ID NO: 4806 SEQ ID NO: 4807 SEQ ID NO: 4808 SEQ ID NO: 4809
870 VPVIQAAI YPVLQSAI WPLSQGAN WPVAQGAN	
### ### ##############################	890 900 910 920 930 940
850 * YRSHGSETP V-SSSQPSTV WSRED-TA VISKES-TT	930 IR IB iipssphGH
840 .* SVDFSAHIAYHF SFDFSAHISYAF SVDYSAHIAYGY SVDYSAHITYAY	920 .* ILISLEVT VFLTFFGRÉI- VLLSIFVRGCC LMLSVFVGKÉI-
830 TIIMSIGFS NLVICTGFS TIIMSIGFS TIIMSIGFS	910 * LLHGLIFLE AAHGLIFIE LLHGLVFLE FLHGLVFLE AIHGLFFIE
820 * LWGVDLDPISMI FWKVNLDSISMI LWGVNLDAISMI LWGVNLDAISMI	900 .* FFKTIFLVVVIG FFKIMFLVMIFG FFKTVVLSISLG FFKTVVLSISLG
810 ASIDIGVEGELSI GSVIVGVTGFMAI ASIDEGVIGYMTI GSIDLGVLGFMTI VSINIGVFGYMTI	890 900 910 920 930 940* * * * *
687 833 739 730 825	767 912 818 809 903
consensus 6 HTPL-L 8 gi 1825729 7 gi 1707052 7 gi 3892144 8	consensus 767 P HTPL-L gi 1825729 818 V gi 1707052 809 V gi 3892144 903 I



HTPL and alignment of Patched motifs Structure of

FIG.

HTPL-L (954 a.a.)

HTPL-S (767 a.a.)

Patched

	78	240	125	97	127
80	ISTNV	VQDLR	TOTRV	IRNNI.	IMMI
70	RICINEVVQVNDF	ATFRAEVSKLDGA	KFANAVYQLDKY	/FSNELKLMESF	vzheieilnow
60	NS-NILDI	SD-SLLDP	NDSNILDP	SGGNILDRY	CGSIMRD
にすぎ 10 20 30 40 50 60 70 80*	VLSSKIRYTFTPDDIRSYTERGSRSEHEPL-VERKFFPGDGYPISRFSIITAKARNS-NILDIR/LNEVVQVNDFISTNV 78	deeedleehytpvGSPAKAERRFVQGHFTTnDSYRFSASRRSTEANFVSLLVVSYSD-SLLDPA'FPAEVSKLDGAVQDLR 240	NPLSDAVYLFTPLGAQSKMERMSIHEKWPL-TDNNYIPGRAVTQSREIQVTALARNDSNILDPKFANAVYQLDKYIQTRV 125	NVVXSLIMIFGPYSYTERRIIHDAWPL-VDGTFVAGRAVTQSREVQVAVVARSGGNILDRVFSNELKLMESFIRNNI 97	LRVDDPSYVFTPSDARWRREISVFNENWPL-DENKFLPGKSFEAKRFVNILIRAKDGGSIMRDNVLHEIEILNQWIMNNI 127
40	FPGDGYP.	SASRRST	TIPGRAVIX	VAGRAVT	LPGKSFE
30	SEHEPL-VERKF	QGHFTTnDSYRF	HEKWPL-TDNNY	HDAWPL-VDGTF	NENWPL-DENKF
20	RSYTERGSR	PAKAERRFV	SKMERMSI	-SYTERRII	RWRREISVF
10*	XTFTPDDI	ehYTPVGS	YLFTPLGA(MIFGPY	YVFTPSDA
notif *	VLSSKIF	deeedle	NPLSDA\	NVVYSLI	LRVDDP
Ħ	7	162	47	22	49
Patched	Consensus	HTPL-L	gi 1825729	gi 1707052	gi 3892144

Replacement Sheet
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		06 *	100	110	120	130	140	150	160	
				• • • • • • • • • • • • • • • • • • • •	: : :	<u>:</u> :	• • • • • • • • • • • • • • • • • • • •		:	
sensus	79	s 79 TIPVSGITLSFKDLCMRFCDINCPVNQHYNGQILRSNLHNSRIDLTYPTWTFFGTKIYLGPNFGGVKLDPNPGN- 152	DLCMRFCDINCE	PVNQHYNGO	ILRSNLHNSR	COLTYPIMI	FFGTKIYLGPN	"GGVKLDPN	-PGN- 1	22
[-1]	241	241 VARRICE - COLONOMICA DIVIDATION IN THE CALCED AND THE COLON OF THE CALCULATION OF THE	TYPOTROVORY	WALL VALUE	O THE THINK O	ST S	EDE M. TOTAL			



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Patched motif (Continued)

226 392 273 246 274	293 452 340 313	370 529 417 390 434	416 571 468 450 514
240* PPFVVGFA PPFHLAYI PRFIISTT PRFIIGAFY	320 * 	400* AIFFDFIY TLLFCYFY ALFFAFIY ALFLTFAY SALLTFAY	
230 * ELVINGLTUI ELVINGLTUI ELKINDTII ELKINDERLE	310 * MPFLVL SPFLIL MPFLVL MPFLVV	390* IQLECIYTAVAI VQCECIYTGTTL VQIECYTTGVAI VQIECIYTMCAL IQFECIYACOSU	470
220 .* SDQVLED1 HFTSLSRQ11 HSQTLAD1 HSQTLSD1 HSQTLSD1	300 .* FFFENSIVCVI VPFVIIVANI WAYNDIVGVI SIQYNDIIAVI VKYNVINTII	380 .* * IGAITPTPEIQL TGIMSSFRSVQC VGAITTIPAVQI VGTITTIPAVQI	460 .* AK VPG VPG OPqkplpscg
210 .* D-HIQ-VTIF L-ALKKIEVV P-YIS-ITYF AKYIS-ITYF D-VIT-LSFP	290 .* SAFGLLFWLG SGFGLLLHIC TGVGFLSLMC SAMGMLTYLE	370 .* * TSLTNVLSFGIG TTITNILALYTG TSSTDVLSFGVG TALTDALSFGVG TALTDALSFGVG TNVTDVMSFAIG	450 .* QRLDSRGSFKKFCCFFFKRFCCFFVKLFWLGS
200 .* DYLENEYASD JOGFTNIKNIL SHMLTQYPEDP KNKMDEYKKQA	280 .* * SVLTPLMAIVSA SVISAFLAVVSG SVVSAGIAILTG SVSNAGMGIASA	360 * * .EEAGPSITITSEADAAVSILITSADDAAVSILITSADDAAVSILITSADAAVSILITS.	* AAETESP ADPKWPS YEKKTSLSt- (SSTSPLn
190 * TOSK EWELSLF TOSK OWLTHLL TISGEWELELG TISGEWELG TISSEWELG TISGEWELG TISSEWELG TIS	270 * RSKPILAILG RNKMCVAAFG TLSKPILSILG VYTKPILSVIC	350 * * SVKKRWGEVLE SDIRERMSNVXS ITVHERMGECLA KYDQRIAECMA SVPERMSKTLS	430 * 'LRAVD; CWLKRQ 'LIEAVS; ILRPAVS; IRRPAVT;
180 * TKRDPEVEE TKTEDPEYDV IKFPPEEMES IKFYPPEEMS TKROPETS TKQOQKMVEE	260 * * .S-GSLHIDWYR3DCIR D-GSFSIDWVL K-GSGYIDWISS	340 * * HAWQRTTRSLS SAWHKTNLAGD AAVRRTSRTHT ASLKRTDRNLK	420 * YEMGRHSLF REVVCI HEASGGHSILF IEEQGLHSIL
170 180 200 210 220 230 240* * * *	250 260 310 320 320 320 320 320 320 320 320 320 32	330 340 350 360 370 380 390 400* * * *	410
153 314 200 172 201	227 393 274 247 275	294 453 341 314 355	371 530 418 391 435
consensus 1 HTPL-L 3 gi 1825729 2 gi 1707052 1 gi 3892144 2	consensus HTPL-L gi 1825729 gi 1707052 gi 3892144	consensus HTPL-L gi 1825729 gi 1707052	consensus HTPL-L gi 1825729 gi 1707052



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FIG. 1B Patched motif (Continued) 490 500

475 632 528 522 592	555 709 607 600 671	633 779 685 676 744	686 832 738 729 824
560 PAKL LRNL PVNL PANL	640 FISE -GNS KELE EIHK	720 PDFN CQIP PEFN EQYN	800 TVSI TFAI ALAC AVTI
*. (EGLD) PEGLD (EGLE (EGLE (EGLE	TELYS VELYS VELYS V-YYO VSE VYLSE	*. /ADEY .A-ED /AARW .ASRF	··*· TVEVI SLWV SLWV SEWV
550 . CTNM CFHV CSRIH CTHL	630 . RDYEN DAYVÇ FEMEI REMQ-	710 TWRGN QLRRJ SFREN TFREJ	790 PYPLC PQPMC PQPVC PSLPS
* IAIYG SSIYG GASYG ISIYG	··*·· TKFWI TEFWI VQFWI VQFWI TVFFI	TRLLK KILLE KILLE FDATE FEATEN	* CFLFI SLLLI AVLFI SALLI SFLLV
540 LVYLA VLYII VIYLL LIYLG	620 MGKNS VDKNL IGMES IGDDS	700 IWTDR SSAKK: ITMDQ ITTKQ	780 ICMAUV AAMFIU LVMIVI ACMIUI
* TLLVY: TVFIY TWWF TGLWY:	TTPYAL NVY-VSKHAL ICKVAL	.* KDLS: TDVS: KDLV: RDIS:	* · · · · · · · · · · · · · · · · · · ·
530 KVRVCV ESKYFV VVRGIA WIRAIZ	610 VDEFEN TKIFEN VLDFAT ASTFAN	690 RFTTGC GF-IQT RFILGN RFMIGN	770 FIQSII FVRNVI FVQNII
. * LLLNPK LTRSE LMHPV LMQPW	6 LANCT LENCT VHAMV MDKMA	.* VKKFR ISSRG VKSFR IKTFR	7 .* IGPTT ILEDT IIPNT VVPNT
500 510 520 530 540 550 560*	600 PENRDR KDVRQK HTSRDR HTSRDR PVERIN	680 DYETTI SSSNEI DDNGTM NNSERI	760 770 780 790 800 ** * * * -AFFLDQLLSIGPTTIQSIIWTLICMAVVCFLFIPNPNTVFVITVSI -FIYFDQYAAILEDTVRNVLNSAAMFIVSILLI.PYPLCSLWYTFAI -WMFTDQYAIIIIPNTVQNIIIALLWNIVIAVLFIPQPMCSLWYALAC -WLFTDQYALVVPNTMQDIIVAVACMLVISALLI.PQPVCSFWVAVTI AFPFADQYLIILPATIQNVVISLLCMAVVSFLI.VPSLPSGFVIFVSI
5. KFFLN: FFRD' KFFGEI	6(************************************	64 4-KTD: 1-NIS: MPDD: 1-RWN:	7 (AFFLI FIYFI WMFTI
O - AVVF - PMSI - LTSF - AATS	O NNNPPI TKKVI NNAPI SNPPI LNPPN	0 LLVWDN DJ IYWGF VVVWG- LKIN-	0
\$10 * -AEQ tDIH -VKQP- -LHHC -REEKd	590 * VIVEVNI VMVIVI VQIVINI LQIVUSI	670 + HWVGDL H PLAEDI PWVVDV	750 * yaqkni
CKSHE-SDEHGASHD-ASHD-ASKH-	OYGPR OYGPR CYGQQ HYGAS	SPGFS: SPGFS: SPOFQ: SKTNN SDMSQ: FGGST	sphsc.
500 SSK SVP HSA HatSPA	580 EKHVWP ENYFSD EKYFWK EKHYWH EKHYWH	660 FL-KS FLSNF FL-AS YI-YS	740
 tmtsq	LRLRE FRVEE YRLLe YRVLe	DLLEW NNIPE GLLHH DHAAQ KLNSW	 nrkil
490 500 510 520 530 540 550 560*	570 580 590 600 610 620 620 630 640* * * * * * *	650 660 670 680 690 700 710 720 * * * * * * *	730 ED 2A PI EVSÉG:
ipaef	570 580 600 610 620 620 630 640* * * *	650 660 670 680 690 700 710 720* *	730 740 750 760 770 780 790 800* * * * * * * VIVEDED
417 572 469 451 515	476) 633) 529) 593)	556 1 710 (608 1 601 :	634 780 686 677 745
sus 5729 7052 2144	sus 5729 7052 2144	sus 5729 7052 2144	0.24
consensus HTPL-L gi 182572 gi 170705, gi 389214	consensus HTPL-L gi 182572 gi 389214	consensus HTPL-L gi 182572 gi 170705; gi 389214	consensus HTPL-L gi 182572 gi 170705 gi 389214
υποσο	υποσο	υποσο	OHODO



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Patch d motif (Continued)

66 111 17 08 02	4805 4806 4807 4808 4809
880 .CVL 7 .GVC 9 .AVS 8 .AVS 8	SEQ ID NO: 4805 SEQ ID NO: 4806 SEQ ID NO: 4808 SEQ ID NO: 4808
* LSTIL ISTII MSTII MSTIL	SEQ II
### ### ##############################	
* LLGVP ALGWP DLGWP	 SSI 8 9 IRI 8 IYL 8 SEL 9
860 .ADALE SVEALY KEALS CCDALG	890 900 910 920 930 940
* PPDERI SVNQKS SAGRV TSARV	* RTSNP HPSAQ HISNI
850 SHGSET SSSQPS SRED-T SKES-T	930 1 ssphG
···*· YHFYR! YAFV-! YGYVV! YAYVI!	#
840 . SAHIA' SAHIS' SAHIA' SAHIT'	890 900 910 920 93* * * * * PLLFVPSYMVVVFFKTIFLVVVIGLLHGLIFLPIILSLFVT VLAAAAKAYIFRTFFKIMFLVMIFGAAHGLIFIPVFLTFFGRffi VLADIPAYMIVTFFKTVVLSISIGLHGLVFLPVLLSIFVRGCGiipss VLSDVPAYMIVTFFKTVFLAISIGFLHGLVFLPIMLSVFVGKi ILYTVDAXIILVFFKTIMLTMLIGAIHGLFFIPIFLSLFPV
*. FSVDF FSVDY FSVDY FSVDY	*. LPILL LPVLL LPLML
830 . IMSIG VICTG IMSIG IMSVG	910 HGLIFLE HGLVFLE HGLVFLE
* SMITI SMITI SMITI SMITI	*. VIGLL IFGAA SLGLL SIGFL
820 . DLDPI NLDPI NLDAI NLDAI	900 . 'IFLVV MFLVM VVLSI VVLSI 'VFLAI
. SEWGV PFWKV TTLWGV TTLWNV	···· VFFKT TFFKI TFFKT VFFKT
810 . SVEGEN SVIGEN SVIGEN SVEGEN	890 . SYMVV AYIFR PAYMIV
ASIDIG	····*· TLEVE TAAAR TADIE TSDVE
387 333 339 339 335	67 112 118 118 03
consensus (HTPL-L Egi 1825729 7 gi 1707052 7 gi 3892144 E	consensus 7 HTPL-L 9 gi 1707052 8 gi 3892144 9